



Legal  
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Series

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# TECHNOLOGY ADDICTION: Beyond Drugs and Alcohol

Approved for 1.5 General Credits for Washington Attorneys

Presented on June 30, 2015 • Seattle, WA

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## Program Faculty

Christeine M. Terry, Ph.D. — *Seattle, WA*



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# Program Schedule

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## Technology Addiction: Beyond Drugs and Alcohol

Tuesday, June 30, 2015

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- |            |  |
|------------|--|
| 11:30 a.m. | <b>Webcast Check-in</b>  |
| 12:00 p.m. | <b>Welcome and Introduction</b>  |
| 12:03 p.m. | <b>What is Technology Addiction and is it a Real “Addiction”</b><br>Define “tech addiction” and discuss issues for attorneys surrounding this new condition.         |
| 12:23 p.m. | <b>Traditional Addiction Research and Treatment</b><br>How can traditional addiction research and treatment contribute to our understanding of technology addiction? |
| 12:43 p.m. | <b>Treatment and Resources for Technology Addiction</b>  |
| 1:03 p.m.  | <b>Discussion and Questions</b>  |
| 1:28 p.m.  | <b>Conclusion</b>  |
| 1:30 p.m.  | <b>Adjourn</b>   |



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## CHAPTER ONE

### **TECHNOLOGY ADDICTION: BEYOND DRUGS AND ALCOHOL What is Technology Addiction and is it a Real “Addiction”?**

June 2015

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**CHRISTEINE TERRY** is a licensed, independent practitioner at Seattle psychology and Seattle behavioral health. She also works as a contract disability examiner for the Veteran’s Administration. Dr. Terry received her graduate degree at the University of Washington and completed her postdoctoral training at the Palo Alto VA Healthcare System. After completing her training, she worked for three years as a staff psychologist at a unique clinic that specializes in evidence-based treatments in Portland, Oregon. Since returning to Seattle, Dr. Terry has opened two private practice offices where she specializes in providing evidence-based treatments to individuals and families with addiction. She has provided multiple workshops and talks on various addiction topics.

# Info Sheet: Technology Addiction

Christeine M. Terry, Ph.D.

## What is it?

- “*Technology addiction*” is not a recognized disorder by the American Psychological or American Psychiatric Association.
  - Although commonly used, the term “addiction” is not a recognized diagnostic or clinical term used by the American Psychological and American Psychiatric Associations.
  - The DSM-5, the diagnostic set of guidelines established by the American Psychiatric Association in 2013 and used by insurance companies and many practitioners, uses the diagnostic category “Substance Use Disorder” to describe problematic drug and alcohol use commonly called “addiction.”
- The DSM-5 (APA, 2013) recognizes “***Internet Gaming Disorder***” as a “condition for further study” – a condition requiring more research before it is recognized as a formal disorder.
  - “***Internet Gaming Disorder***” is defined as “persistent and recurrent use” of internet gaming that leads to “clinically significant impairment or distress” (APA, 2013, p. 795).
- Although the majority of research of problematic technology use has focused on internet gaming disorder, research on problematic use of online auction websites and other internet activities (e.g., social media use) is increasing and subsequently, a broader term, “internet addiction” has been created to capture a variety of problematic internet use that is not limited to internet gaming.
- “***Internet Addiction***” (also known as “***Internet Dependency***” or “***Internet Compulsivity***”) is defined as “any online-related, compulsive behavior which interferes with normal living and causes severe stress on family, friends, loved ones, and one’s work environment” (Young, 2009, [www.netaddictions.com](http://www.netaddictions.com)).
- Although technology addiction is not recognized as a formal disorder, several researchers, clinicians, and members of the public have raised concerns about problematic internet, video game, and Smart Phone use. There are multiple studies documenting patterns of technology use (playing online video games, internet gambling, etc.) that appear similar to patterns of problematic behaviors such as gambling and problematic substance use.
- Prevalence of internet addiction ranges from 6% to 30% (Yellowlees & Marks, 2007).

## What are the signs of Internet Addiction?

- Young (2007) and Beard & Wolf (2001) criteria for **Internet Addiction** (must endorse first 5 signs and at least 1 of the final 3 signs) :
  - **Preoccupation** with the internet
  - Need to spend more time on the internet to achieve same satisfaction (a.k.a., **tolerance**)
  - Repeated **efforts to reduce or stop** internet use
  - **Negative mood effects** (irritability, depression) when internet use is limited
  - **Staying online longer** than intended
  - **Negative impact** of internet use on work or relationships
  - **Lying** about internet use
  - Internet use as a **way to regulate mood**
- **Two easy questions** to remember to determine whether internet/technology use may be a problem for you or your loved one:
  - **Does your or your loved one's use of technology worry you?**
  - **Does your or your loved one's technology use cause negative effects in relationships, at work/school, in leisure activities, or with his/her health?**
  - If the answer is yes to either question, then your or your loved one's technology use *may* qualify as Internet Addiction and seeking help, either by taking steps to reduce use on your own or seeking help from professional, may be warranted.

## Are there any tests for Technology Addiction?

- **The Internet Addiction Test** (IAT, Young, 1998) is a self-report measure that assesses the impact of internet use (all online activity) on daily life (sleep, social relationships, feelings). It is the most widely used test of internet addiction. It is free, available in multiple languages, and has fair levels of reliability and validity.
  - To access the IAT: <http://netaddiction.com/internet-addiction-test/>
- There are other self-report measures that assess the impact of internet or specific types of technology use, but they have less research support and results should be interpreted with caution as the reliability and validity of these measures are still being tested (the University of Washington's Alcohol and Drug Abuse Institute (ADAI) website contains additional information about each scale as well as how to access them: <http://lib.adai.uw.edu/instruments/> ).
  - Internet Related Problem Scale (IRPS)
  - Internet User Assessment Screen (IUAS)
  - Internet Over-Use Scale & Cell-Phone Over-Use Scale (IOS; COS)
  - Problem Video Game Play (PVP)

## Internet Addiction Test (IAT) by Dr. Kimberly Young.

Internet Addiction Test (IAT) is a reliable and valid measure of addictive use of Internet, developed by Dr. Kimberly Young. It consists of 20 items that measures mild, moderate and severe level of Internet Addiction.

To begin, answer the following questions by using this scale:-

0	Does not apply
1	Rarely
2	Occasionally
3	Frequently
4	Often
5	Always

	Question	Scale					
1	How often do you find that you stay on-line longer than you intended?	1	2	3	4	5	0
2	How often do you neglect household chores to spend more time on-line?	1	2	3	4	5	0
3	How often do you prefer the excitement of the Internet to intimacy with your partner?	1	2	3	4	5	0
4	How often do you form new relationships with fellow on-line users?	1	2	3	4	5	0
5	How often do others in your life complain to you about the amount of time you spend on-line?	1	2	3	4	5	0
6	How often do your grades or school work suffers because of the amount of time you spend on-line?	1	2	3	4	5	0
7	How often do you check your email before something else that you need to do?	1	2	3	4	5	0
8	How often does your job performance or productivity suffer because of the Internet?	1	2	3	4	5	0
9	How often do you become defensive or secretive when anyone asks you what you do on-line?	1	2	3	4	5	0
10	How often do you block out disturbing thoughts about your life with soothing thoughts of the Internet?	1	2	3	4	5	0
11	How often do you find yourself anticipating when you will go on-line again?	1	2	3	4	5	0
12	How often do you fear that life without the Internet would be boring, empty, and joyless?	1	2	3	4	5	0
13	How often do you snap, yell, or act annoyed if someone bothers you while you are on-line?	1	2	3	4	5	0
14	How often do you lose sleep due to late-night log-ins?	1	2	3	4	5	0
15	How often do you feel preoccupied with the Internet when off-line, or fantasize about being on-line?	1	2	3	4	5	0
16	How often do you find yourself saying "just a few more minutes" when on-line?	1	2	3	4	5	0
17	How often do you try to cut down the amount of time you spend on-line	1	2	3	4	5	0

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	and fail?						
<b>18</b>	How often do you try to hide how long you've been on-line?	1	2	3	4	5	0
<b>19</b>	How often do you choose to spend more time on-line over going out with others?	1	2	3	4	5	0
<b>20</b>	How often do you feel depressed, moody or nervous when you are off-line, which goes away once you are back on-line?	1	2	3	4	5	0

Total up the scores for each item. The higher your score, the greater level of addiction is.

**20 – 49 points:**

You are an average on-line user. You may surf the Web a bit too long at times, but you have control over your usage.

**50 – 79 points:**

You are experiencing occasional or frequent problems because of the Internet. You should consider their full impact on your life.

**80 – 100 points:**

Your Internet usage is causing significant problems in your life. You should elevate the impact of the Internet on your life and address the problems directly caused by you Internet usage.

# **INTERNET ADDICTION: THE EMERGENCE OF A NEW CLINICAL DISORDER**

**Kimberly S. Young**  
*University of Pittsburgh at Bradford*

*Published in CyberPsychology and Behavior, Vol. 1 No. 3., pages 237-244*

*Paper presented at the 104th annual meeting of the  
American Psychological Association, Toronto, Canada, August 15, 1996.*

Anecdotal reports indicated that some on-line users were becoming addicted to the Internet in much the same way that others became addicted to drugs or alcohol which resulted in academic, social, and occupational impairment. However, research among sociologists, psychologists, or psychiatrists has not formally identified addictive use of the Internet as a problematic behavior. This study investigated the existence of Internet addiction and the extent of problems caused by such potential misuse. This study utilized an adapted version of the criteria for pathological gambling defined by the DSM-IV (APA, 1994). On the basis of this criteria, case studies of 396 dependent Internet users (Dependents) and a control group of 100 non-dependent Internet users (Non-Dependents) were classified. Qualitative analyses suggests significant behavioral and functional usage differences between the two groups. Clinical and social implications of pathological Internet use and future directions for research are discussed.

## **Internet Addiction: The Emergence Of A New Clinical Disorder**

### **Methodology**

Subjects  
Materials  
Procedures

### **Results**

Demographics  
Usage Differences  
Length Of Time Using Internet  
Hours Per Week  
Applications Used  
Extent Of Problems

### **Discussion**

### **References**

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## **INTERNET ADDICTION: THE EMERGENCE OF A NEW CLINICAL DISORDER**

Recent reports indicated that some on-line users were becoming addicted to the Internet in much the same way that others became addicted to drugs, alcohol, or gambling, which resulted in academic failure (Brady, 1996; Murphey, 1996); reduced work performance (Robert Half International, 1996), and even marital discord and separation (Quittner, 1997). Clinical research on behavioral addictions has focused on compulsive gambling (Mobilia, 1993), overeating (Lesieur & Blume, 1993), and compulsive sexual behavior (Goodman, 1993). Similar addiction models have been applied to technological overuse (Griffiths, 1996), computer dependency (Shotton, 1991), excessive television viewing (Kubey & Csikszentmihalyi, 1990; McIlwraith et al., 1991), and obsessive video game playing (Keepers, 1991). However, the concept of addictive Internet use has not been empirically researched. Therefore, the purpose of this exploratory study was to investigate if Internet usage could be considered addictive and to identify the extent of problems created by such misuse.

With the popularity and wide-spread promotion of the Internet, this study first sought to determine a set of criteria which would define addictive from normal Internet usage. If a workable set of criteria could be effective in diagnosis, then such criteria could be used in clinical treatment settings and facilitate future research on addictive Internet use. However, proper diagnosis is often complicated by the fact that the term addiction is not listed in the Diagnostic and Statistical Manual of Mental Disorders - Fourth Edition (DSM-IV; American Psychiatric Association, 1994). Of all the diagnoses referenced in the DSM-IV, Pathological Gambling was viewed as most akin to the pathological nature of Internet use. By using Pathological Gambling as a model, Internet addiction can be defined as an impulse-control disorder which does not involve an intoxicant. Therefore, this study developed a brief eight-item questionnaire referred to as a Diagnostic Questionnaire (DQ) which modified criteria for pathological gambling to provide a screening instrument for addictive Internet use:

1. Do you feel preoccupied with the Internet (think about previous on-line activity or anticipate next on-line session)?
2. Do you feel the need to use the Internet with increasing amounts of time in order to achieve satisfaction?
3. Have you repeatedly made unsuccessful efforts to control, cut back, or stop Internet use?
4. Do you feel restless, moody, depressed, or irritable when attempting to cut down or stop Internet use?
5. Do you stay on-line longer than originally intended?
6. Have you jeopardized or risked the loss of significant relationship, job, educational or career opportunity because of the Internet?
7. Have you lied to family members, therapist, or others to conceal the extent of involvement with the Internet?
8. Do you use the Internet as a way of escaping from problems or of relieving a dysphoric

mood (e.g., feelings of helplessness, guilt, anxiety, depression)?

Respondents who answered "yes" to five or more of the criteria were classified as addicted Internet users (Dependents) and the remainder were classified as normal Internet users (Non-Dependents) for the purposes of this study. The cut off score of "five" was consistent with the number of criteria used for Pathological Gambling. Additionally, there are presently ten criteria for Pathological Gambling, although two were not used for this adaptation as they were viewed non-applicable to Internet usage. Therefore, meeting five of eight rather than ten criteria was hypothesized to be a slightly more rigorous cut off score to differentiate normal from addictive Internet use. It should be noted that while this scale provides a workable measure of Internet addiction, further study is needed to determine its construct validity and clinical utility. It should also be noted that the term Internet is used to denote all types of on-line activity.

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## METHODOLOGY

### Subjects

Participants were volunteers who responded to: (a) nationally and internationally dispersed newspaper advertisements, (b) flyers posted among local college campuses, (c) postings on electronic support groups geared towards Internet addiction (e.g., the Internet Addiction Support Group, the Webaholics Support Group), and (d) those who searched for keywords "Internet addiction" on popular Web search engines (e.g., Yahoo).

### Materials

An exploratory survey consisting of both open-ended and closed-ended questions was constructed for this study that could be administered by telephone interview or electronic collection. The survey administered a Diagnostic Questionnaire (DQ) containing the eight-item classification list. Subjects were then asked such questions as : (a) how long they have used the Internet, (b) how many hours per week they estimated spending on-line, (c) what types of applications they most utilized, (d) what made these particular applications attractive, (e) what problems, if any, did their Internet use cause in their lives, and (f) to rate any noted problems in terms of mild, moderate, or severe impairment. Lastly, demographic information from each subject such as age, gender, highest educational level achieved, and vocational background were also gathered..

### Procedures

Telephone respondents were administered the survey verbally at an arranged interview time. The survey was replicated electronically and existed as a World-Wide-Web (WWW) page implemented on a UNIX-based server which captured the answers into a text file. Electronic

answers were sent in a text file directly to the principal investigator's electronic mailbox for analysis. Respondents who answered "yes" to five or more of the criteria were classified as addicted Internet users for inclusion in this study. A total of 605 surveys in a three month period were collected with 596 valid responses that were classified from the DQ as 396 Dependents and 100 Non-Dependents. Approximately 55% of the respondents replied via electronic survey method and 45% via telephone survey method. The qualitative data gathered were then subjected to content analysis to identify the range of characteristics, behaviors and attitudes found.

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## **RESULTS**

### **Demographics**

The sample of Dependents included 157 males and 239 females. Mean ages were 29 for males, and 43 for females. Mean educational background was 15.5 years. Vocational background was classified as 42% none (i.e., homemaker, disabled, retired, students), 11% blue-collar employment, 39% non-tech white collar employment, and 8% high-tech white collar employment. The sample of Non-Dependents included 64 males and 36 females. Mean ages were 25 for males, and 28 for females. Mean educational background was 14 years.

### **Usage Differences**

The following will outline the differences between the two groups, with an emphasis on the Dependents to observe attitudes, behaviors, and characteristics unique to this population of users.

### **Length of Time using Internet**

The length of time using the Internet differed substantially between Dependents and Non-Dependent. Among Dependents, 17% had been online for more than one year, 58% had only been on-line between six months to one year, 17% said between three to six months, and 8% said less than three months. Among Non-Dependents, 71% had been online for more than one year, 5% had been online between six months to one year, 12% between three to six months, and 12% for less than three months. A total of 83% of Dependents had been online for less than one full year which might suggest that addiction to the Internet happens rather quickly from one's first introduction to the service and products available online. In many cases, Dependents had been computer illiterate and described how initially they felt intimidated by using such information technology. However, they felt a sense of competency and exhilaration as their technical mastery and navigational ability improved rapidly.

### **Hours Per Week**

In order to ascertain how much time respondents spent on-line, they were asked to provide a best

estimate of the number of hours per week they currently used the Internet. It is important to note that estimates were based upon the number of hours spent "surfing the Internet" for pleasure or personal interest (e.g., personal e-mail, scanning news groups, playing interactive games) rather than academic or employment related purposes. Dependents spent a  $M = 38.5$ ,  $SD = 8.04$  hours per week compared to Non-Dependents who spent  $M = 4.9$ ,  $SD = 4.70$  hours per week. These estimates show that Dependents spent nearly eight times the number of hours per week as that of Non-Dependents in using the Internet. Dependents gradually developed a daily Internet habit of up to ten times their initial use as their familiarity with the Internet increased. This may be likened to tolerance levels which develop among alcoholics who gradually increase their consumption of alcohol in order to achieve the desired effect. In contrast, Non-Dependents reported that they spent a small percentage of their time on-line with no progressive increase in use. This suggests that excessive use may be a distinguishable characteristic of those who develop a dependence to on-line usage.

### Applications Used

The Internet itself is a term which represents different types of functions that are accessible on-line. Table 1 displays the applications rated as "most utilized" by Dependents and Non-Dependents. Results suggested that differences existed among the specific Internet applications utilized between the two groups as Non-Dependents predominantly used those aspects of the Internet which allowed them to gather information (i.e., Information Protocols and the World Wide Web) and e-mail. Comparatively, Dependents predominantly used the two-way communication functions available on the Internet (i.e., chat rooms, MUDs, news groups, or e-mail).

**Table 1: Internet Applications Most Utilized by Dependents and Non-Dependents**

Application	Type of Computer User	
	Dependents	Non-Dependents
Chat Rooms	35%	7%
MUDs	28%	5%
News groups	15%	10%
E-mail	13%	30%
WWW	7%	25%
Information Protocols	2%	24%

Chat rooms and Multi-User Dungeons, more commonly known as MUDs were the two most utilized mediums by Dependents. Both applications allow multiple on-line users to simultaneously communicate in real time; similar to having a telephone conversation except in

the form of typed messages. The number of users present in these forms of virtual space can range from two to over thousands of occupants. Text scrolls quickly up the screen with answers, questions, or comments to one another. Sending a "private message" is another available option that allows only a single user to read a message sent. It should be noted that MUDs differ from chat rooms as these are an electronic spin off of the old Dungeon and Dragons games where players take on character roles. There are literally hundreds of different MUDs ranging in themes from space battles to medieval duels. In order to log into a MUD, a user creates a character name, Hercules for example, who fights battles, duels other players, kills monsters, saves maidens or buys weapons in a make believe role playing game. MUDs can be social in a similar fashion as in chat room, but typically all dialogue is communicated while "in character."

News groups, or virtual bulletin board message systems, were the third most utilized application among Dependents. News groups can range on a variety of topics from organic chemistry to favorite television programs to the best types of cookie-dough. Literally, there are thousands of specialized news groups that an individual user can subscribe to and post and read new electronic messages. The World-Wide Web and Information Protocols, or database search engines that access libraries or electronic means to download files or new software programs, were the least utilized among Dependents. This may suggest that the database searches, while interesting and often times time-consuming, are not the actual reasons Dependents become addicted to the Internet.

Non-Dependents viewed the Internet as a useful resource tool and a medium for personal and business communication. Dependents enjoyed those aspects of the Internet which allowed them to meet, socialize, and exchange ideas with new people through these highly interactive mediums. Dependents commented that the formation of on-line relationships increased their immediate circle of friends among a culturally diverse set of world-wide users. Additional probing revealed that Dependents mainly used electronic mail to arrange "dates" to meet on-line or to keep in touch between real time interactions with new found on-line friends. On-line relationships were often seen as highly intimate, confidential, and less threatening than real life friendships and reduced loneliness perceived in the Dependent's life. Often times, Dependents preferred their "on-line" friends over their real life relationships due to the ease of anonymous communication and the extent of control in revealing personal information among other on-line users.

### **Extent of Problems**

One major component of this study was to examine the extent of problems caused by excessive Internet use. Non-Dependents reported no adverse affects due to its use, except poor time management because they easily lost track of time once on-line. However, Dependents reported that excessive use of the Internet resulted in personal, family, and occupational problems that have been documented in established addictions such as pathological gambling (e.g., Abbott, 1995), eating disorders (e.g., Copeland, 1995), and alcoholism (e.g., Cooper, 1995; Siegal, 1995). Problems reported were classified into five categories: academic, relationship, financial, occupational, and physical. Table 2 shows a breakdown of the problems rated in terms of mild,

moderate, and severe impairment.

**Table 2: Comparison of Type of Impairment to Severity Level Indicated**

Impairment	Impairment Level			
	None	Mild	Moderate	Severe
Academic	0%	2%	40%	58%
Relationship	0%	2%	45%	53%
Financial	0%	10%	38%	52%
Occupational	0%	15%	34%	51%
Physical	75%	15%	10%	0%

Although the merits of the Internet make it an ideal research tool, students experienced significant academic problems as they surf irrelevant web sites, engage in chat room gossip, converse with Internet pen-pals, and play interactive games at the cost of productive activity. Students had difficulty completing homework assignments, studying for exams, or getting enough sleep to be alert for class the next morning due to such Internet misuse. Often times, they were unable to control their Internet use which eventually resulted in poor grades, academic probation, and even expulsion from the university.

Marriages, dating relationships, parent-child relationships, and close friendships were also noted to be poorly disrupted by excessive use of the Internet. Dependents gradually spent less time with real people in their lives in exchange for solitary time in front of a computer. Initially, Dependents tended to use the Internet as an excuse to avoid needed but reluctantly performed daily chores such as doing the laundry, cutting the lawn, or going grocery shopping. Those mundane tasks were ignored as well as important activities such as caring for children. For example, one mother forgot such things as to pick up her children after school, to make them dinner, and to put them to bed because she became so absorbed in her Internet use.

Loved ones first rationalize the obsessed Internet user's behavior as "a phase" in hopes that the attraction would soon dissipate. However, when addictive behavior continued, arguments about the increased volume of time and energy spent on-line soon ensue, but such complaints were often deflected as part of the denial exhibited by Dependents. Dependents become angry and resentful at others who questioned or tried to take away their time from using the Internet, often times in defense of their Internet use to a husband or wife. For example, "I don't have a problem," or "I am having fun, leave me alone," might be an addict's response. Finally, similar to alcoholics who hide their addiction, Dependents engaged in the same lying about how long their Internet sessions really lasted or they hide bills related to fees for Internet service. These behaviors created distrust that over time hurt the quality of once stable relationships.

Marriages and dating relationships were the most disrupted when Dependents formed new relationships with on-line "friends." On-line friends were viewed as exciting and in many cases lead to romantic interactions and Cybersex (i.e., on-line sexual fantasy role-playing). Cybersex and romantic conversations were perceived as harmless interactions as these sexual on-line affairs did not involve touching and electronic lovers lived thousands of miles away. However, Dependents neglected their spouses in place of rendezvous with electronic lovers, leaving no quality time for their marriages. Finally, Dependents continued to emotionally and socially withdraw from their marriages, exerting more effort to maintain recently discovered on-line relationships.

Financial problems were reported among Dependents who paid for their on-line service. For example, one woman spent nearly \$800.00 in one month for on-line service fees. Instead of reducing the amount of time she spent on-line to avoid such charges, she repeated this process until her credit cards were over-extended. Today, financial impairment is less of an issue as rates are being driven down. America On-line, for example, recently offered a flat rate fee of \$19.95 per month for unlimited service. However, the movement towards flat rate fees raises another concern that on-line users are able to stay on-line longer without suffering financial burdens which may encourage addictive use.

Dependents reported significant work-related problems when they used their employee on-line access for personal use. New monitoring devices allow bosses to track Internet usage, and one major company tracked all traffic going across its Internet connection and discovered that only twenty-three percent of the usage was business-related (Neuborne, 1997). The benefits of the Internet such as assisting employees with anything from market research to business communication outweigh the negatives for any company, yet there is a definite concern that it is a distraction to many employees. Any misuse of time in the work place creates a problem for managers, especially as corporations are providing employees with a tool that can easily be misused. For example, Edna is a 48 year old executive secretary found herself compulsively using chat rooms during work hours. In an attempt to deal with her "addiction," she went to the Employee Assistance Program for help. The therapist, however, did not recognize Internet addiction as a legitimate disorder requiring treatment and dismissed her case. A few weeks later, she was abruptly terminated from employment for time card fraud when the systems operator had monitored her account only to find she spent nearly half her time at work using her Internet account for non-job related tasks. Employers uncertain how to approach Internet addiction among workers may respond with warnings, job suspensions, or termination from employment instead of making a referral to the company's Employee Assistance Program (Young, 1996b). Along the way, it appears that both parties suffer a rapid erosion of trust.

The hallmark consequence of substance abuse are the medical risk factors involved, such as cirrhosis of the liver due to alcoholism, or increased risk of stroke due to cocaine use. The physical risk factors involved with Internet overuse were comparatively minimal yet notable. Generally, Dependent users were likely to use the Internet anywhere from twenty to eighty hours per week, with single sessions that could last up to fifteen hours. To accommodate such excessive use, sleep patterns are typically disrupted due to late night log-ins. Dependents typically stayed up past normal bedtime hours and reported being on-line until two, three, or four

in the morning with the reality of having to wake for work or school at six a.m. In extreme cases, caffeine pills were used to facilitate longer Internet sessions. Such sleep deprivation caused excessive fatigue often making academic or occupational functioning impaired and decreased one's immune system leaving Dependents' vulnerable to disease. Additionally, the sedentary act of prolonged computer use resulted in a lack of proper exercise and lead to an increased risk for carpal tunnel syndrome, back strain, or eyestrain.

Despite the negative consequences reported among Dependents, 54% had no desire to cut down the amount of time they spent on-line. It was at this point that several subjects reported feeling "completely hooked" on the Internet and felt unable to kick their Internet habit. The remaining 46% of Dependents made several unsuccessful attempts to cut down the amount of time they spent on-line in an effort to avoid such negative consequences. Self-imposed time limits were typically initiated to manage on-line time. However, Dependents were unable to restrict their usage to the prescribed time limits. When time limits failed, Dependents canceled their Internet service, threw out their modems, or completely dismantled their computers to stop themselves from using the Internet. Yet, they felt unable to live without the Internet for such an extended period of time. They reported developing a preoccupation with being on-line again which they compared to "cravings" that smokers feel when they have gone a length of time without a cigarette. Dependents explained that these cravings felt so intense that they resumed their Internet service, bought a new modem, or set up their computer again to obtain their "Internet fix."

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## DISCUSSION

There are several limitations involved in this study which must be addressed. Initially, the sample size of 396 Dependents is relatively small compared to the estimated 47 million current Internet users (Snider, 1997). In addition, the control group was not demographically well-matched which weakens the comparative results. Therefore, generalizability of results must be interpreted with caution and continued research should include larger sample sizes to draw more accurate conclusions.

Furthermore, this study has inherent biases present in its methodology by utilizing an expedient and convenient self-selected group of Internet users. Therefore, motivational factors among participants responding to this study should be discussed. It is possible that those individuals classified as Dependent experienced an exaggerated set of negative consequences related to their Internet use compelling them to respond to advertisements for this study. If this is the case, the volume of moderate to severe negative consequences reported may be an elevated finding making the harmful affects of Internet overuse greatly overstated. Additionally, this study yielded that approximately 20% more women than men responded which should also be interpreted with caution due to self-selection bias. This result shows a significant discrepancy from the stereotypic profile of an "Internet addict" as a young, computer-savvy male (Young,

1996a) and is counter to previous research that has suggested males predominantly utilize and feel comfortable with information technologies (Busch, 1995; Shotton, 1991). Women may be more likely to discuss an emotional issue or problem more than men (Weissman & Payle, 1974) and therefore were more likely than men to respond to advertisements in this study. Future research efforts should attempt to randomly select samples in order to eliminate these inherent methodological limitations.

While these limitations are significant, this exploratory study provides a workable framework for further exploration of addictive Internet use. Individuals were able to meet a set of diagnostic criteria that show signs of impulse-control difficulty similar to symptoms of pathological gambling. In the majority of cases, Dependents reported that their Internet use directly caused moderate to severe problems in their real lives due to their inability to moderate and control use. Their unsuccessful attempts to gain control may be paralleled to alcoholics who are unable to regulate or stop their excessive drinking despite relationship or occupational problems caused by drinking; or compared to compulsive gamblers who are unable to stop betting despite their excessive financial debts.

The reasons underlying such an impulse control disability should be further examined. One interesting issue raised in this study is that, in general, the Internet itself is not addictive. Specific applications appeared to play a significant role in the development of pathological Internet use as Dependents were less likely to control their use of highly interactive features than other on-line applications. This paper suggests that there exists an increased risk in the development of addictive use the more interactive the application utilized by the on-line user. It is possible that a unique reinforcement of virtual contact with on-line relationships may fulfill unmet real life social needs. Individuals who feel misunderstood and lonely may use virtual relationships to seek out feelings of comfort and community. However, greater research is needed to investigate how such interactive applications are capable of fulfilling such unmet needs and how this leads to addictive patterns of behavior.

Finally, these results also suggested that Dependents were relative beginners on the Internet. Therefore, it may be hypothesized that new comers to the Internet may be at a higher risk for developing addictive patterns of Internet use. However, it may be postulated that "hi-tech" or more advanced users suffer from a greater amount of denial since their Internet use has become an integral part of their daily lives. Given that, individuals who constantly utilize the Internet may not recognize "addictive" use as a problem and therefore saw no need to participate in this survey. This may explain their low representation in this sample. Therefore, additional research should examine personality traits that may mediate addictive Internet use, particularly among new users, and how denial is fostered by its encouraged practice.

A recent on-line survey (Brenner, 1997) and two campus-wide surveys conducted at the University of Texas at Austin (Scherer, 1997) and Bryant College (Morahan-Martin, 1997) have further documented that pathological Internet use is problematic for academic performance and relationship functioning. With the rapid expansion of the Internet into previously remote markets and another estimated 11.7 million planning to go on-line in the next year (Snider, 1997), the Internet may pose a potential clinical threat as little is understood about treatment implications

for this emergent disorder. Based upon these findings, future research should develop treatment protocols and conduct outcome studies for effective management of this symptoms. It may be beneficial to monitor such cases of addictive Internet use in clinical settings by utilizing the adapted criteria presented in this study. Finally, future research should focus on the prevalence, incidence, and the role of this type of behavior in other established addictions (e.g., other substance dependencies or pathological gambling) or psychiatric disorders (e.g., depression, bipolar disorder, obsessive-compulsive disorder, attention deficit disorder).

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## ACKNOWLEDGEMENT

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**Dr. David Greenfield**

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Assistant Clinical Professor of Psychiatry,  
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Thirteen Warning Signs of Internet Addiction in Your Spouse, Friend, or Loved One.

From *Virtual Addiction* by Dr. David Greenfield, copyright 1999, 2006.

Accessed from <http://virtual-addiction.com/thirteen-signs/>.

## **Thirteen Warning Signs of Internet Addiction in Your Spouse, Friend, or Loved One.**

From *Virtual Addiction* by Dr. David Greenfield, copyright 1999, 2006.

Accessed from: <http://virtual-addiction.com/thirteen-signs/>.

Recognizing the warning signs of Internet addiction in your spouse or loved one is the first step in your helping them help themselves. The following warning signs should serve as general guidelines for you to determine whether or not your spouse, family member, or friend may have a problem.

### **Does your loved one:**

1. Spend a lot of time alone with their computer on a regular basis?
2. Become defensive when you confront them with their behavior?
3. Seem either unaware of what they have been doing, or attempt to deny it?
4. Prefer spending time with their computer or on the Internet than with you or other people?
5. Lose interest in other, previously important activities, e.g., friends, sports, work, hobbies, exercise, etc.?
6. Appear to be more socially isolated, moody, or irritable?
7. Seem to be establishing “a second life,” with new and different friends whom they met online?
8. Spend greater amounts of time online, and attempt to cover or “minimize” the screen when you come in the room.
9. Arrange unexpected time away from home on business trips or for other reasons, and seem to be away more than usual (this can be for out-of-town liaisons to meet up with cyberlovers)
10. Have unexplained charges on your credit card bill, and offer suspicious explanations.
11. Exhibit signs that their work or school performance is suffering, e.g., they were fired, grades are slipping, or their household responsibilities are neglected.
12. Talk about their time on the computer incessantly, and seem to draw meaning in their life from this activity.
13. Have legal problems as a result of their Internet behavior, e.g., loss of child custody, divorce, or sexual harassment charges at work due to downloading pornography, etc.

## ADDITIONAL RESOURCES

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We suggest the following online resource for additional information:

<http://www.sciencedirect.com/science/article/pii/S0747563205000439>

“Problematic Internet use or Internet addiction?”

By Peter M. Yellowlees and Shayna Marks

From Computers in Human Behavior, Volume 23, Issue 3, May 2007, pages 1447-1453.

CHAPTER TWO

**TECHNOLOGY ADDICTION: BEYOND DRUGS AND ALCHOL  
Traditional Addiction Research and Treatment**

June 2015

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News Today. Retrieved from <http://www.medicalnewstoday.com/articles/278530.php>.

# 'Technology addiction' - how should it be treated?

Last updated: Friday 20 June 2014 at 12am PST

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**T**o what extent technology addiction or Internet addiction can be considered a genuine medical disorder is contentious. The term has been in popular use since the mid-1990s but is still not fully recognized in the Diagnostic and Statistical Manual of Mental Disorders.

Now, as technology **addiction** clinics open across many countries in an attempt to ween citizens off their smartphones and computers, we look at some of the arguments surrounding this most modern of addictions.

Earlier this month, India became the latest country to sign up to what some concerned nations are depicting as a war on an addiction that has their youth in its grip. In Bangalore, India's "silicon capital," the country's premier **mental health** hospital has opened its first "technology de-addiction clinic."

In doing so, India has joined South Korea, China, Taiwan and Singapore in using dedicated technology addiction clinics to confront what many Asian-Pacific cultures consider to be a growing public health problem.

Doctors at the Bangalore clinic, run by the National Institute of Mental Health & Neurosciences (Nimhans), told *The Indian Express* that, typically, the patients being referred are children whose parents are concerned either by a sharp academic decline or their child withdrawing from family interactions.

"Parents lament that their son or daughter is spending far too much time on the smartphone, or posting numerous photos on Facebook, or complaining of **anxiety**, loneliness and boredom when denied use of the device," Dr. Manoj Kumar Sharma, one of the doctors running the Nimhans clinic, told the paper.

**The symptoms and nature of this perceived addiction vary from case to case but hinge around a perceived excessive engagement with a user's smartphone, the Internet or social networking sites that comes at the expense of their mental well-being. Persistent checking of instant messaging apps and frequent changing of status updates - as well as the notorious uploading of "selfies" - are linked in addiction cases to insomnia, depression and social withdrawal.**

As these kind of treatment centers are yet to reach many Western countries, the act of admitting a child to a clinic for spending too much time on Facebook or playing with their smartphone may sound excessive.

However, in India, the launch of the clinic appeared timely - in the same week the Nimhans center opened, Indian newspapers were reporting a case of a 13-year-old who hanged herself after her mother asked her to delete her

Facebook account.

Schools concerned about the popularity of texting, selfies and multi-player online games have also been seeking help from the clinic. Some have asked for Nimhans staff to train their student counsellors, or hold awareness camps and screening and rehabilitation programs for addicted students.

A year-long study by the Indian Council for Medical Research published in 2013 corroborates the parental and educational concerns, claiming that among its 2,750 participants there was an "alarming" rate of technology dependence.

## 'Tech addiction epidemic' in Asia-Pacific and the treatment response

The Asia-Pacific region - home to the what are considered the "gold star" Internet de-addiction centers and treatment programs - is said to boast the world's highest level of smartphone penetration, with Singapore and Hong Kong at the top, according to media monitoring firm Nielsen's 2013 report.

**In Singapore, 87% of a population of 5.4 million own smartphones. By contrast, the US has a smartphone prevalence of 65% - which is considered low by the Asia-Pacific standard. Citizens of Singapore are also more indulgent users of social media, spending an average of 38 minutes per session on Facebook - about twice as long as the average American session.**

Singapore has been the site of some of the world's most pro-active technology addiction campaigns. A major "cyber wellness" education program targeting pre-school children is about to be launched, and the "Put it on friend mode" campaign from Nanyang Technological University - which encouraged smartphone users to put their phones away while with loved ones - apparently drew major support.

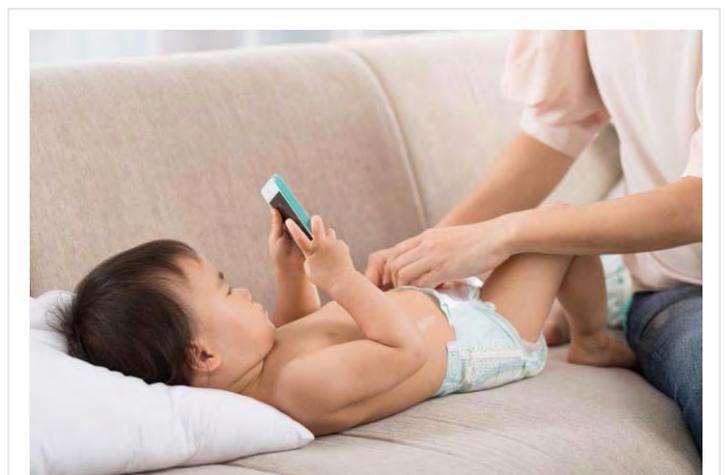
*Medical News Today* asked Dr. Adrian Wang, a psychiatrist at the Gleneagles Medical Centre in Singapore, why he believes social media use has twice the impact in that country compared with the US. He considers the problem to be largely one of access to technology from an increasingly young age.

"Many Singaporean kids - from as young as 7 or 8 - already have access to a smartphone or device," he says. "The habit grows from there. By their teens, most kids are pretty tech-savvy, and a combination of peer influence (everybody's on Facebook or Whatsapp) and ease of access (cheap mobile devices) means everyone's glued to their smartphone at some point of the day."

A standard treatment program at one of the dedicated technology addiction clinics in Singapore is based around cognitive behavioral therapy (CBT).

**Dr. Wang explains that the first step is to identify triggers for excessive Internet, social media or technology use - such as boredom or stress. Next, learned automatic responses - such as using the smartphone to relieve anxiety - are challenged and reversed.**

"At a deeper level, exploring their thoughts and beliefs about anxiety and how they handle it is crucial," he says. "Like dealing with an addictive behavior, it's a long process and there may be ups and downs before long-term improvements are achieved. Medications are rarely used."



"Many young Singaporean kids already have access to a smartphone or device," Dr. Wang says. "The habit grows from there."

## The US and the origins of 'Internet addiction disorder'

CBT is also the cornerstone of the therapy offered by Dr. Kimberley Young, the leading Internet addiction therapist and author in the US. Dr. Young founded the **netaddiction.com** website in 1995 - the same year that the phrase "Internet addiction disorder" was coined in an essay by the New York-based psychiatrist Dr. Ivan Goldberg.

**Dr. Goldberg's "Internet addiction disorder" was actually a hoax - he was attempting to satirize the the American Psychiatric Association's psychiatry textbook, the Diagnostic and Statistical Manual of Mental Disorders (DSM), by applying criteria from DSM's gambling addiction to the Internet - which was something of a novelty in 1995.**

But many readers of Goldberg's essay took the proposition seriously, with some Internet early adopters posting serious accounts of their own perceived addiction online and informal Internet addiction groups springing up on university campuses.

Dr. Young was arguably the first psychiatrist to take Goldberg's premise of Internet addiction seriously and mounted a campaign for the disorder to be included in the next edition of the DSM.

It took until 2013 and the publication of DSM-5 before an Internet-related disorder - "Internet gaming addiction" - was included. "Which is a major achievement," Dr. Young told us.

"I see this as the normal development for the DSM," she reasons. "It takes years of research to establish new disorders. Just look how long substance dependence - such as **alcoholism** - or pathological gambling or eating disorders took to get in the DSM. Plus all the research done on Internet addiction used a variety of methods and measurements, so it was unclear if we were all studying the same phenomenon."

The inclusion of an Internet-related addiction in the DSM may encourage psychiatrists to diagnose patients with a form of "Internet addiction" - a labeling that is still regarded as contentious by some Western mental health professionals.

**"We have been lagging behind other countries," Dr. Young told us. "I think US culture is conservative. The answer is that simple. It is more of a cultural issue than a clinical issue. The problem is real but how countries choose to address it will vary."**

However, she also describes resistance toward the labeling of new disorders from US **health insurance** companies, who are keen to limit the number of conditions that they have to reimburse.

"We also don't have government-based health care, so in the US any new disorder is more of a grass roots effort to get it established," she adds.

Dr. Young believes that what is known as the South Korean "Master Plan" is the global leader for prevention and treatment of Internet addiction. "They have by far the most comprehensive plan," she gushes, "even over China, it was quite impressive."



"We also don't have government-based health care, so in the US any new disorder is more of a grass roots effort to get it established," Dr. Young says.

## Is tech addiction less well-diagnosed in the US than in China?

China itself has over 300 Internet addiction centers. In 2007, concern from China over a report stating that 13.7% of its youth (about 10 million teenagers) met the criteria for Internet addiction disorder led to the implementation of laws discouraging more than 3 hours of daily online gaming.

**However, in February of this year, the state broadcaster CCTV claimed that 24 million young Chinese people are "addicted" to the Internet.**

This raises the question of whether Chinese attempts to control the epidemic via treatment centers and regulations have failed to the extent that the problem has more than doubled in 7 years, or if there is a political motivation for China's mass diagnosis of net addiction. China, after all, is a state with a notoriously censorial approach to the Internet, whose citizens have largely been banned from accessing social media since activists used Facebook to co-ordinate protests against the republic in 2009.

Other professionals have suggested, however, that prevalence of Internet addiction is simply harder to measure in Western states than in Asian countries, and so is less visible.

For example, Dr. Jerald J. Block, who campaigned for Internet addiction to be included in DSM-5, wrote in the *American Journal of Psychiatry* that, "unlike in Asia, where Internet cafes are frequently used, in the United States games and virtual sex are accessed from the home. Attempts to measure the phenomenon are clouded by shame, denial and minimization."

## Why a standalone diagnosis of 'Internet addiction' may be unhelpful

In November 2012, a study into Internet addiction among European youths from researchers at the London School of Economics (LSE) in the UK proposed a different take on the concept of "Internet addiction." Rather than view problems related to Internet use as "addiction," the researchers employed the term "excessive use" to describe patterns of "repetitive, compulsive and uncontrolled" use.

The authors reasoned that where Internet use is blamed for declining school results in children or increased family tension, "it is not at all clear whether excessive Internet use is the cause of these problems - it could be a symptom or a consequence of these or other underlying troubles."

The LSE team applied the five basic components of Internet addiction, as defined by the British psychologist Dr. Mark Griffiths, to the participants in their study. They asked the children how often they experienced the following:

1. "I have gone without eating or sleeping because of the Internet"
2. "I have felt bothered when I cannot be on the Internet"
3. "I have caught myself surfing when I am not really interested"
4. "I have spent less time than I should with either family, friends or doing schoolwork because of the time I spent on the Internet"
5. "I have tried unsuccessfully to spend less time on the Internet."



They found that very few participants experienced all five components, which suggested to the researchers that a specific "addiction" to the Internet is less prevalent than is generally feared.

However, the researchers did find a relationship between excessive Internet use and problematic online and offline behavior. These include psychological and emotional difficulties, drinking alcohol and substance abuse.

The LSE researchers argue that rather than pinning an "addict" label to children who use the Internet excessively, children's engagement with technology should be understood within the wider context of their everyday life.

They write:

"Psychological approaches suggest that people use the Internet excessively to compensate for social or psychological difficulties, and deficits in personal well-being in terms of their everyday offline life. Studies have linked sensation-seeking (a tendency to pursue excitement and sensory pleasure), loneliness and emotional problems (such as **depression** and low self-confidence) to excessive Internet use."

Therefore, children who are psychologically vulnerable are more likely to engage in excessive Internet use because they are trying to compensate for problems in their offline lives. This is relevant to how psychologists or counsellors approach treatment, because "the child may not see their Internet use as a problem but as a positive, coping response to other social, emotional and psychological challenges in the child's life."

We put this to Dr. Wang, who broadly agreed with the LSE's findings. He told us:

**"I am generally not in favor of a standalone 'Internet addiction' diagnosis, and I agree that it is more a symptom of a larger problem - anxiety, depression, boredom, self-esteem issues to name a few - than an illness itself. Making it a DSM diagnosis 'medicalizes' the problem."**

"However," he adds, "there are individuals with addictive personalities who may be more vulnerable to developing such an addiction. It's a combination of factors - an addictive personality plus a trigger (e.g., anxiety or depression) snowballing to full-blown addiction symptoms."

Although we are now nearing a 20th anniversary of Dr. Goldberg's Internet addiction disorder hoax, it seems that clinicians are still largely divided on the validity of such a disorder, and, if it does exist, what the best way of approaching it might be.

But it is not without some irony we note that, at the time of writing, a temporary Facebook outage lasting just 20 minutes has plunged users of social media into turmoil, with broadsheet newspapers going as far as to **live-blog the downtime**.

"If anything," writes the technology **website Ubergizmo**, "this incident only highlights our addiction, to the social network."

*Medical News Today* recently reported on a study that suggested **cell phone addiction is becoming an increasing concern** in high school and college students.

**Written by David McNamee**

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First tech de-addiction clinic opens; experts see 'tip of iceberg', Saritha Rai, *The Indian Express*, accessed 20 June 2014.

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 There is 1 opinion.

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CHAPTER THREE

**TECHNOLOGY ADDICTION: BEYOND DRUGS AND ALCHOL**  
**Treatment and Resources for Technology Addiction**

June 2015

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- There are **practical steps you can take to limit your problematic technology use**:
  - **Become aware** of your pattern of problematic technology use. For example, keep a diary of how frequently you check your email, how long you spend checking email, and your thoughts and feelings immediately prior to checking your email.
  - **Identify** the emotions, thoughts, contexts, and urges that led to problematic technology use.
  - **Create a plan** for managing the emotions, thoughts, contexts, and urges that lead to problematic technology use. For example, doing an engaging activity offline when you feel stressed in order to stop problematic checking of email.
  - **Create barriers** to engaging in technology (e.g., keeping your phone outside of your bedroom to discourage checking it while in bed).
  - **Set limits** for technology use and consider taking technology holidays (times when using a specific technology or all of technology is not allowed).
  - **Reach out to others and enlist a trusted person's help** with managing your problematic tech use. If there is no one that you trust or that you feel will be helpful in your recovery from technology addiction, consider ITAA or a therapist skilled in addiction treatment, particularly internet addiction.

## Resources on Technology Addiction

### Articles

Turel, O., Serenko, A., & Bontis, N. (2011). Family and work-related consequences of addiction to organizational pervasive technologies. *Information & Management, 48*(2-3), 88-95.

- The article describes the results of a study on the use of mobile email for work. The authors found that those with higher levels of mobile email use had increased perceptions of work stress, increased conflict between technology and family, and decreased commitment to their employer.

Widyanto, L. & Griffiths, M. (2006). Internet Addiction: A critical review. *International Journal of Mental Health and Addiction, 4*(1), 31-51.

- A comprehensive review of the state of the research on internet addiction. The authors conclude that there is evidence for the diagnosis of “internet addiction,” but state that the factors underlying internet addiction remain unclear.

Yellowlees, P.M. & Marks, S. (2007). Problematic internet use or internet addiction? *Computers in Human Behavior, 23*(3), 1447-1453.

- Provides an easy to understand overview of the controversy about the diagnosis of internet addiction and the state of the research evidence on it.

Young, K. S. (1998). Internet addiction: The emergence of a new clinical disorder. *CyberPsychology & Behavior, 1*(3), 237–244.

- The “classic” paper on internet addiction. Dr. Young is credited for creating the term “internet addiction” and identifying the symptoms that comprise internet addiction.

Young, K.S. (2013). CBT-IA: The first treatment model for internet addiction. *Journal of Cognitive Psychotherapy: An International Quarterly, 25*(4), 304-312.

- Describes the model, course, and treatment termed Cognitive Behavioral Therapy for Internet Addiction (CBT-IA). The results of the first study on CBT-IA with over 100 participants are discussed. The results provide very preliminary support for the use of CBT-IA in treating internet addiction.

### Books

Carnes, P. J. & Delmonico, D. L. (2007). *In the shadows of the net: Breaking free of compulsive online sexual behavior* (2<sup>nd</sup> Ed). Center City, MN: Hazelden.

Greenfield, D. N. (1999). *Virtual addiction: Help for netheads, cyberfreaks, and those who love them*. Oakland, CA: New Harbinger.

Roberts, K. (2010). *Cyber junkie: Escape the gaming and internet trap*. Center City, MN: Hazelden.

Whitty, M. & Joinson, A. (2009). *Truth, lies and trust on the internet*. Hove, East Sussex, New York: Routledge.

Young, K. S. (1998). *Caught in the net: How to recognize the signs of internet addiction & a winning strategy for recovery*. New York: J Wiley.

Young, K. S. (2001). *Tangled in the web: Understanding cybersex from fantasy to addiction*. 1<sup>st</sup> Book Library.

### **Online Assessments**

**The Internet Addiction Test** (a.k.a., Internet Addiction Scale) assesses the impact of internet use on various life domains (e.g., sleep, social relationships). It is one of the few measures with published statistics on its reliability and validity: <http://netaddiction.com/internet-addiction-test/>

**The Center for Internet and Technology Addiction** website has a variety of brief online tests of problematic technology use (e.g., Smart Phone use) that are available for free. Statistics on the reliability and validity of the measures were not located on the site: <http://virtual-addiction.com/internet-addiction-test/>

**The University of Washington's Alcohol and Drug Abuse Institute (ADAI)** website contains brief descriptions and locations of assessments for various problematic technology use: <http://lib.adai.uw.edu/instruments/>

### **Online Resources**

**The Center for Internet and Technology Addiction:** [www.virtual-addiction.com](http://www.virtual-addiction.com).

- A website for an organization developed by David Greenfield, Ph.D. who is recognized as a leading expert on technology addiction. The site contains interviews with Dr. Green, articles, brief assessments of problematic types of technology use, and resources for prevention and treatment of technology addiction.

**Net Addiction:** [www.netaddiction.com](http://www.netaddiction.com).

- The website for an organization developed by Kimberly Young, Ph.D. who is considered one of the leading experts on internet addiction. Dr. Young is largely credited for creating the term and the symptoms that comprise “internet addiction.” It contains links to articles, the Internet Addiction Test (IAT) (one of the most widely used tests of internet addiction), and resources on treatment.

### **Treatment Resources**

**Internet Addiction Program at Bradford Regional Medical Center** in Bradford, PA provides residential treatment for internet addiction based on CBT-IA, one of the few therapies for internet addiction with emerging research support: <http://www.brmc.com/programs-services/internet-addiction-bradford-pa.php>

**Internet and Tech Addiction Anonymous (ITAA)** is a free peer support program for technology addiction based on the 12 step model of recovery (a.k.a., AA model): <http://www.netaddictionanon.org>

**Psychology Today Find a Therapist** is a database of mental health professionals. You can search by location, problem or diagnosis, and type of therapy. To help limit the results to those that are more likely to be relevant and useful, I suggest searching for the term “internet addiction” and limiting selections to “cognitive behavioral therapy,” a treatment that has been shown by research to be effective in treating various addictions (behavioral and substance use). <https://therapists.psychologytoday.com/rms/>

**reStart:** Center for Digital Technology Sustainability provides residential, outpatient, and “family coaching” for technology addiction in Fall City, WA: <http://netaddictionrecovery.com/>

## **Kick your smartphone habit and lower stress with this expert advice.**

Dr. David Greenfield, Founder of The Center for Internet and Technology Addiction and Director of The Healing Center, LLC. The Center for Internet and Technology Addiction. Accessed from <http://expertbeacon.com/kick-your-smartphone-habit-and-lower-stress-expert-advice/#.VUValyFVikq>.

We all love our smartphones. The problem is that we are not so smart when we use them. They condition us unconsciously to respond to all the bells and beeps with never ending attention; all this leads to overuse, elevated levels of stress hormones, and leaves us near-addicted and tied to our phones like a virtual ball and chain.

### **Do**

- remember what the cell phone is for
- remember that we are conditioned to respond
- remember that not everything needs to be responded to instantly
- take a tech holiday
- try to do other things

### **Don't**

- stare at your cell phone all the time
- talk on the phone in public places
- use your cell phone while driving
- take your cell phone to bed with you or keep it under your pillow
- keep your cellphone on and next to you when you are eating

### **Do remember what the cell phone is for**

Your smartphone should help you be happier, healthier, and more productive. It should not be there to control every aspect of your life. So get in the mindset of treating your phone as just that, a tool to be more productive, and nothing more.

### **Do remember that we are conditioned to respond**

Smartphones and the internet are the world's largest slot machines. They condition us to respond to the beeps and buzzes with elevated stress hormones, and when we get a reward, for example an email, text, tweet, for google search result we like, we get a nice hit of dopamine, which is a pleasure neurotransmitter.

### **Do remember that not everything needs to be responded to instantly**

The beauty of digital technology is that it affords us the opportunity to deal with our information and communication needs at a later time. It shifts time and space for us and allows us the luxury of doing things when it is more convenient. If we resist the temptation to respond instantly, we don't have to feel like we are controlled to stop everything we are doing just to respond to a notification the second it happens.

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Source:<http://expertbeacon.com/kick-your-smartphone-habit-and-lower-stress-expert-advice>.

### **Do take a tech holiday**

Pick a day a week, or a day a month to leave your cell phone off or at home, even if it is only for a few hours. Take control of having it on or off. Yes, you can actually turn it off. If you can't do a day. Take a few hours. You'll be amazed how much more you get done and how liberating it feels.

### **Do try to do other things**

Instead of mindlessly staring and surfing on your smartphone, be conscious of how and what you are doing with your time. Instead of playing with your phone, turn it off. Read a book, take a walk, relax, talk (real-time) with someone near you. Try to untether yourself from the closed world of your smartphone.

### **Don't**

#### **Do not stare at your cell phone all the time**

Try to be more conscious of when you are automatically looking at your smartphone without thinking. The idea is to change your pattern of use. If you notice yourself looking at your phone for no reason than to check to see if you missed a text, put it back in your pocket and take a break from it.

#### **Do not talk on the phone in public places**

When you are social, be social in real-time. When you are with people, doing something to not to be distracted from the moment. Besides, by answering texts, emails, or phone calls while you are with people, it can be considered rude and will only make you disconnect from the group.

#### **Do not use your cell phone while driving**

You can easily get in a wreck if you are staring at your screen while you are driving down the road, no matter how fast you are going. Try to liken the use of your cell phone with drinking while driving. You don't drink and drive do you? Well, it should be a never-do-it activity when it comes to texts, emails or surfing, and sparingly with voice as well.

#### **Do not take your cell phone to bed with you or keep it under your pillow**

Buy an alarm clock and turn off your smartphone. Get a good nights sleep without the buzzes, beeps, and rings that usually happen every night or early am.

#### **Do not keep your cellphone on and next to you when you are eating**

Eat when you eat, and leave the smartphone out of it. Find other things to do when you eat, like talking with your friends or loved ones. Be present at your meals and don't be distracted by setting another place at the dinner table for your phone.

## **Summary**

Try to do other things besides mindlessly and automatically staring and surfing your phone. The first part of reclaiming real-time living is to take control of your use and fighting the neurochemical habit that has you conditioned to reflexively look at your phone. The beeps and buzzes are indicators to your nervous system that a possible reward (dopamine) is around the corner, so conscious use is your only antidote.

When you notice you're unconsciously using your phone, try to do something different. Read a book, take a walk, talk to real person that is standing or sitting next to you. Untether that automatic twitch to check your texts or email for the 79th time that day. This will help to create new neurological pathways for your habit which may take a month or two. Begin to take control of your use, and that means turning off for a while. Yes, there is an off button on your smartphone.